



Elevating on the Myakka - A Tale of Two Elevations

Full Mitigation Best Practice Story

Sarasota County, Florida

Sarasota, FL – In July 2003 summer rains in Sarasota County once again swelled the Myakka River beyond its bank, this time flooding 41 homes for 30 days. While many cleaned up the muddy mess and made repairs as they had in the past, two of the homeowners sought to end the irritations and damages of frequent flooding by raising their houses above possible future floodwaters.



"When you live by a river and your house floods four times in five years you need to do something drastic," said Marlene Guffey, the mother of one of the homeowners. Neighbors Richard and Sharon Landis, also elevated their home.

Sarasota County wanted to help homeowners, such as Guffey's daughter and the Landis family, with the cost of elevating by applying for Flood Mitigation Assistance (FMA) grants on behalf of the homeowner. These grants fund planning or construction projects to reduce or eliminate property damages and flood- insurance claims. The Federal Emergency Management Agency (FEMA) administers the grant through Florida's Department of Community Affairs (DCA).

"We canvassed the Myakka River neighborhoods for homeowners interested in FMA grants," said Sarasota County Community Rating System (CRS) Coordinator Desiree Companion.

Guffey's daughter volunteered for the program. She met with County officials to learn what the grant required, reviewed proposed plans to raise the house on reinforced concrete blocks, and delivered estimates so County representatives could complete the grant application.

After extensive review, the state and FEMA hazard mitigation officials approved Sarasota County's application for Guffey's daughter to receive \$55,275 in reimbursable expenses. She agreed to pay the 25-percent-matching-grant requirement and any costs above those included in the approved application.

The project began with the contractor excavating to three feet below grade and dismantling utility lines and plumbing that hung below the surface level. They brought in equipment that lifted the home on sturdy jacks. The concrete- block house with floor and wall footings temporarily rested on steel beams supported with wood blocks and jacks. Contractors built the new concrete block wall, foundation, and bond beams underneath that would anchor and elevate the house to a height of eight feet above the Base Flood Elevation (BFE), Zone A8 – elevation eight feet above mean sea level. Upon completion, the contractor reset and anchored the house on the bond beams. Later, they reconnected the utilities and installed new plumbing.

The enclosed ground level with concrete floor is susceptible to frequent flooding above the BFE in an A-zone, because of its proximity to the Myakka River especially during the 500-year flood event has permanent openings. Concrete blocks laid horizontally and screened, with an area equivalent in inches for every square foot of enclosed area, as required by the Floodplain Ordinance adapted by the city for construction in an A-zone with floors below the BFE. The owner decided to install permanent openings or vent, located one foot above the grade of exterior walls. This would allow floodwater to directly enter for the automatic equalization of hydrostatic flood forces on exterior walls to prevent future damage to the structure.

While NFIP regulations allow some storage below the house, Guffey's daughter decided to leave the space empty. In addition, they built a raised platform outside the house, one foot above the highest recorded flood, to support the air condensing unit and water heater.

Next door, the Landis family began their own elevation project. Sharon Landis said that since the documentation and approval process could add another year beyond the normal six months of construction to their project, "we chose to expedite elevating our home and paid for it ourselves."

The Landis' contractor disconnected the electric, removed the plumbing, and excavated below the house. They also removed trees so the workers easily accessed the property and installed large wood beams under the house to lift it.

With the house raised, the workforce constructed pillars on reinforced concrete footings. The concrete columns supported the house at a height of 14 feet and 11 inches – 6 feet and 11 inches above the BFE. The house is located in Zone A8, Elevation eight feet above mean sea level. After building a new septic system and re-attaching the utilities, the workers lowered the house and anchored it to the columns and then backfilled the area under the house. To complete the job they planted sod on the sloped area to divert water around the perimeter.

Sharon Landis estimated the total project cost at \$110,000 and construction took less than six months from start to occupancy.

“Whether preparing a budget for a grant or paying for the elevation privately, get estimates on everything, even landscaping and backfill,” Guffey said.

The two families have drastically cut their chances of flooding since floodplain managers for Sarasota County agree that there is less than a one-percent chance of the Myakka flooding to 2003 levels again.

“We’re glad we elevated the house and utilities,” Guffey said. “It saves us money because we don’t have to replace things when the river floods.”

Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region IV**

State: **Florida**

County: **Sarasota County**

Key Activity/Project Information

Sector: **Public**

Hazard Type: **Flooding**

Activity/Project Type: **Elevation, Structural; Elevation, Utilities**

Activity/Project Start Date: **01/2004**

Activity/Project End Date: **Ongoing**

Funding Source: **Hazard Mitigation Grant Program (HMGP); National Flood Insurance Program (NFIP); Private funds**

Funding Recipient: **Property Owner - Residential**

Activity/Project Economic Analysis

Cost: **\$170,000.00 (Estimated)**

Activity/Project Disaster Information

Mitigation Resulted From Federal Disaster? **Yes**

Federal Disaster #: **1481 , 07/29/2003**

Value Tested By Disaster? **Yes**

Tested By Federal Disaster #: **No Federal Disaster specified**

Year First Tested: **2004**

Repetitive Loss Property? **Yes**

Reference URLs

Reference URL 1: <http://www.floridadisaster.org>

Reference URL 2: <http://www.fema.gov/pdf/government/grant/fma/fma06guid>

Main Points

- In July 2003 the Myakka River flooded beyond its bank flooding 41 homes for 30 days.
- Two of the homeowners sought to end the irritations and damages of frequent flooding by raising their houses above possible future floodwaters.
- After review, the state and FEMA hazard mitigation officials approved Sarasota County's application for \$55,275 in reimbursable expenses.
- The estimated total project cost was \$110,000 and construction took less than six months from start to occupancy.



Standing next to the elevated house and utilities.



The Landis house lifted after the elevation project.